

***Information Disclosure Statement:***

Regarding item 2 of the DETAILED ACTION (page 2 of the OFFICE ACTION SUMMARY):  
The information disclosure statement ...

Applicant apologize for missing copies of each of reference in order to consider the references, listed in the applicant's Form PTO-1449 applied to the Patent Application from 06/27/97.

Regarding item 3 of the DETAILED ACTION (page 2 of the OFFICE ACTION SUMMARY):  
The information disclosure statement ...

Considering, that Patent Search had been made by Applicant about one year ago with no copies of each of references, there is very difficult to present all of them to PTO at this time. Applicant one more time apologize.

***Claim Rejections - 35 U.S. C.112:***

Regarding item 4 of the DETAILED ACTION (page 3 of the OFFICE ACTION SUMMARY):  
Claim 17 is rejected under 35 U.S. C.112, second paragraph, as being indefinite ...

Applicant agrees with Examiner and Claim 17 has been amended (please, see amended and rewritten Claim 15).

Regarding item 5 of the DETAILED ACTION (page 3 of the OFFICE ACTION SUMMARY):  
Claim 17 recites the limitation "said remote light beam" in line 1. There is insufficient antecedence basis for this limitation in the claim.

Applicant agrees with Examiner and Claim 17 has been amended (please, see amended and rewritten Claim 15).

Regarding item 6 of the DETAILED ACTION (page 3 of the OFFICE ACTION SUMMARY):  
Claims 17 recites the limitation "said fiber optics means" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Applicant agrees with Examiner and Claim 17 has been corrected (please, see amended and rewritten Claim 15).

***Claim Rejections - 35 U.S. C.102:***

Regarding item 7 of the DETAILED ACTION (page 3 of the OFFICE ACTION SUMMARY):  
The following is quotation of the appropriate paragraphs of 35 U.S. C.102 that form the basis for the rejection under this section made in this Office Action: ...

Applicant thanks Examiner for the fragment of 35 U.S. C.102 presented in Office Action.

Regarding item 8 of the DETAILED ACTION (page 3 of the OFFICE ACTION SUMMARY):  
Claims 1-15 are rejected under 35 U.S. C.102(e) as being anticipated by Staff et al. (5,619,333).

Applicant agrees with Examiner regarding Claims 2, 3. The Claims 2, 3 are canceled under 35 U.S. C.102.

Regarding Claims 1, 4-15, Applicant would like to present a comparative analysis of the referred by Examiner patent with the improved methods and device claimed in the Applicant's Patent Application No. 08/884,680 from 06/27/97. This analysis is proving that the Applicant's improved methods and device by Claims 1, 4-15 are not being anticipated by U.S. Patent No. 5,619,333 - Staff et al. (please, see the comparative table 1 on the pages 4, 5 of this amendment).

Also, considering the substantial significance of the Claims 4, 5, applicant agrees to pay fee for fee-paying amendment and has amended (has rewritten) Claims 4, 5 as an independent (please, see Claim 3 in the Rewritten Claims) and two dependents claims (please, see Claims 4, 5 in the Rewritten Claims).

The comparative table 1 (see pages 4, 5)

Applicant has also made an additional (second) Patent Search, which has not revealed other known Patents and Technical-Scientific publications, which could be adequated to the legal equivalent of Applicant's improved methods and device by Claims 1, 4-15 of the Applicant's Application No. 08/884,680.

Regarding item 9 of the DETAILED ACTION (page 4 of the OFFICE ACTION SUMMARY):  
Claim 6 and 16, 17 are rejected under 35 U.S. C.102(e) as being fully anticipated by Chandler et al. (5,731,875) or Schmitz et al. (5,610,712).

Regarding Claims 6, 16, 17, Applicant would like to present a comparative analysis of the referred by Examiner patent with the improved methods and device claimed in the Applicant's Patent Application No. 08/884,680 from 06/27/97. This analysis is proving that the Applicant's improved methods and device by Claims 6, 16, 17 are not being anticipated by U.S. Patent No. 5,731,875 - Chandler et al. and No. 5,610,712 - Schmitz et al. (please, see the comparative table 2 on the pages 6, 7 of this amendment).

The comparative table 2 (see pages 6, 7)

Applicant has also made an additional (second) Patent Search, which has not revealed other known Patents and Technical-Scientific publications, which could be adequated to the legal equivalent of Applicant's improved methods and device by Claims 6, 16, 17 of the Applicant's Application No. 08/884,680.

Table 1

Referred Patent No. 5,619,333 (Staff et al.)	Application Serial No. 08/884,680
Claims 1-15 are rejected, because:	The disclosure made in the item 8 of Office Action is not in the Referred Patent and belong exclusively to the above Application
<p>1) "...a light detecting means (4)... " - [see lines 1,2 of the bottom of page 3 of Office Action]</p> <p>2) "...a light source (451)... " - [see line 1 of the bottom of page 3 of Office Action]</p> <p>3) "...intersects a light beam in an area of a light detection means..." [see line 1 of the top of page 4 of OA ]</p> <p>4) Figs.6-8:</p> <p>a). Fig.6 comprises the comparators (484)</p> <p>b). Fig.7 comprises a voltage comparators (504,</p>	<p>1) Referred Patent does not comprises a light detecting system (4). This Referred Patent comprises <i>an optical sensor</i> (4) [see column 3, line 35 of the top], having <i>window</i> (421) [see column 4, line 25 of the bottom] and <i>lens</i> (43) [see column 4, line 23 of the bottom], which are missing in the above Application.</p> <p>2) Referred Patent does not comprises a light source (451). Referred Patent comprises <i>a bulb</i> (451) [see column 4, line 17 of the bottom], from which the light is <i>focused</i> through <i>the window assembly</i> (42) [see column 4, line 24 of the bottom] <i>by the lens</i> (44) [see column 4, line 23 of the bottom], which are missing in the above Application.</p> <p>3) This is absolutely missing in the Referred Patent and belong <u>only</u> to Claims 1,6 of above Application as a novelty and does not have the known equivalents.</p> <p>4) Referred Patent is based on the method of the analog comparison of the detected signals, which <u>absolutely missing</u> in the above application, because an analog comparison does not provide high sensitivity and precision (see Rewritten Prior Art of the Invention, Redrawn Figs.7-10 and Rewritten Claims 1-15 of the above Application).</p> <p>a). The comparators (484) are missing in the above Application, because of Claims 3-5 (see Rewritten Claims) of the above Application are an improved method and device of a digital timing processing by the digital strobing processes.</p> <p>b). Please, see the description in the item 4a) above</p>

506).

c). Fig. 8 comprises the voltage comparator (512)

in this column.

c). Please, see the description in the item 4a) above in this column

Additionally, applicant would like to bring Examiner's attention to the following:

An improved methods and device (Claims 1-15) eliminate any optic means for focusing, because the point of intersection of the light beam with the particle flow is particularly in the area of the detection means, that provides the elimination of any windows, gates, lenses, etc. and also eliminates a light noise, producing by scattered light.

This is possible, because the improved method (Claim 1) and device (Claims 6-15) provide the elimination of the scattered and non-focused light (please, see figure below). Please, see also lines 4-9 of the top on page 5 of Rewritten Specification.

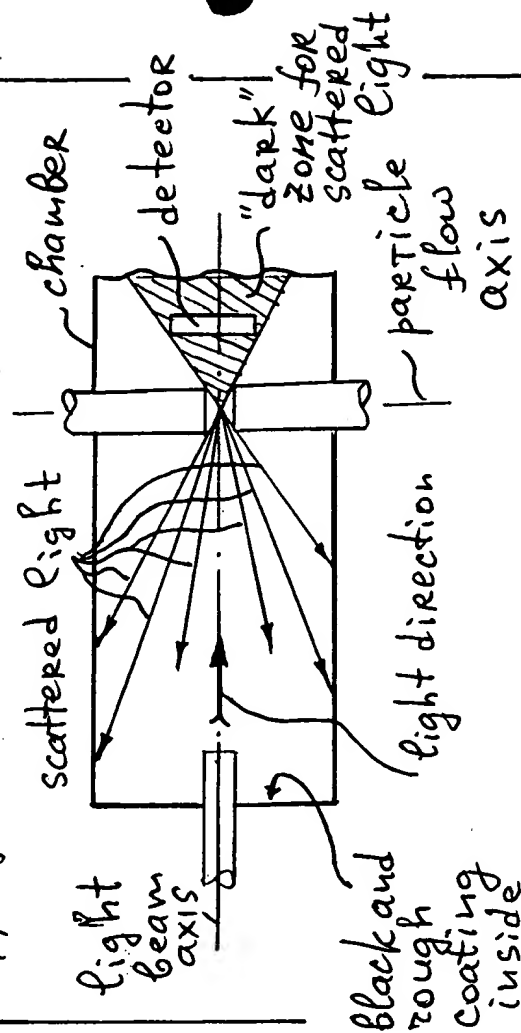


Table 2

Referred Patent No. 5,731,875 (Chandler et al.)	Application Serial No. 08/884,680
Regarding item 9 of the Office Action	
<p>1) Patent and Trademark Office is referred to the Patent No. 5,731,875 (Chandler et al.), which was filed on the date of June 26, 1997.</p>	<p>1) The above Application was filed by Provisional Patent Application Serial No.60/048,277 on the date of June 02, 1997 (please, see also Transmittal Letter of the above Utility Patent Application Serial No. 08/884,680 with the reference to the Provisional Patent Application).</p>
<p>2) Referred Patent has a plurality of light emitting lasers....</p>	<p>2) A plurality of light emitting lasers means <u>absolutely correctly more than one</u> (plural means 2, 3, 4, ..., <math>\infty</math>) and the Claims of Referred Patent do not consist a statement - "at least one of a plurality of light emitting lasers", but in above Application is <u>claimed only one (single) light beam</u>.</p>
<p>3) On Fig.4 is presented a conduit (23) with a plurality of fiber optic stands (27a) [see column 5, lines 18, 19 of the top] and includes an optical element for scattered light collecting (see Claims 1, 9, etc.)</p>	<p>3) Above Application (see Figs.7, 10) represents a single fiber optic connecting means (29), which does not have a conduit and <u>does not have</u> an optical elements for scattered light collection.</p>
<p>4) Fig.4 illustrates:</p>	<p>4) An improved device by above Application <u>does not have</u> none of them.</p>
<p>a). a conduit (23)..., including a plurality of a fiber optic stands (27a), which directs light from each diode (15)...</p>	<p>Additionally, the Referred Patent has a plurality of fiber optic stands with a plurality of laser diodes (a plurality of light sources) for the purpose of power decreasing, that is missing in the above Application.</p>
<p>Referred Patent No. 5,610,712 (Schmitz et al.)</p>	<p>Application Serial No. 08/884,680</p>
<p>1) Referred Patent No. 5,610,712 (Schmitz et al.) claims:</p> <p>a). "...focusing light emanating...to produce a collimated ... light..." (see Claim 1 and focusing lenses (64) and (66) in column 6, lines 31,32 of the bottom)</p> <p>b). "...producing a plurality of diffracted beams..." (see Claim 1 [see column 7, line 13 of the top]).</p>	<p>1) An improved device of above Application:</p> <p>a). <u>does not focusing</u> light emanating...to produce a collimated...light and lenses (see Rewritten Claims 14, 15).</p> <p>b). <u>does not produce</u> a plurality of diffracted beams..." (see Claims 14, 15)..</p>

Table 2 (continuation)

<p>c). "...focusing the diffracted beams with a lens at..." (see Claim 1).</p> <p>d). "...Fourier plane with a plurality..." (see Claim 1).</p> <p>2) Figs.2, 3</p> <p>a). Fig.2 introduces a referred device, comprising a cladding layer surrounding a central arc...[see Claim 4]</p> <p>b). Fig.3 illustrates "...a diffraction and other scattering theory." [see column 7, lines 13, 14].</p>	<p>c). <u>does not focus the diffracted beams with a lens</u> (see Claims 14, 15).</p> <p>d). <u>does not have Fourier plane with a plurality...</u> (see Claims 14,15).</p> <p>2) Referring to above Application:</p> <p>a). an improved device <u>does not comprise a</u> cladding layer surrounding a central arc...</p> <p>b). an improved device <u>criticizes the scattered light principles</u> [see Background of the Invention of the above Application].</p>
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Regarding item 10 of the DETAILED ACTION (page 4 of the OFFICE ACTION SUMMARY):  
Claim 6 and 16, 17 are rejected under 35 U.S. C.102(b) as being fully anticipated by Tatsuno et al. (4,595,291).

Regarding Claims 6, 16, 17, Applicant would like to present a comparative analysis of the referred by Examiner patent with the improved methods and device claimed in the Applicant's Patent Application No. 08/884,680 from 06/27/97. This analysis is proving that the Applicant's improved methods and device by Claims 6, 16, 17 are not being anticipated by U.S. Patent No. 4,595,291 - Tatsuno et al. (please, see the comparative table 3 on the page 9 of this amendment).

The comparative table 3 (see page 9)

Applicant has also made an additional (second) Patent Search, which has not revealed other known Patents and Technical-Scientific publications, which could be adequated to the legal equivalent of Applicant's improved methods and device by Claims 6, 16, 17 of the Applicant's Application No. 08/884,680.

Regarding item 11 of the DETAILED ACTION (page 4 of the OFFICE ACTION SUMMARY):  
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nakamoto et al. (5,325,169) discloses an apparatus for analyzing cells in urine.

Applicant would like to present a comparative analysis of the referred by Examiner patent with the improved methods and device claimed in the Applicant's Patent Application No. 08/884,680 from 06/27/97. This analysis is proving that the Applicant's improved methods and device by Claims 1, 4-17 are not being anticipated by U.S. Patent No. 5,325,169 - Nakamoto et al. (please, see the comparative table 4 on the page 10 of this amendment).

The comparative table 4 (see page 10)

Applicant has also made an additional (second) Patent Search, which has not revealed other known Patents and Technical-Scientific publications, which could be adequated to the legal equivalent of Applicant's improved methods and device by Claims 1, 4-17 of the Applicant's Application No. 08/884,680.

Considering the canceled Claims 2, 3, applicant has amended Specification, Abstract, Claims, Drawings and the Drawing Reference Numerals Worksheet. Additionally, for the eliminating of misunderstanding of the claimed conceptions, applicant has made more narrative description of the claimed improved methods and device instead canceled portion of the text in Specification and Abstract regarding canceled claims and appropriate drawings (applicant has not changed any ideology, subjects and claimed conception, described in the primer application). Also applicant has been corrected a printed errors, improper language and grammatical incorrectness, and also applicant has considered the referred by Examiner Patents (see Rewritten BACKGROUND OF THE INVENTION in the Rewritten Specification).

Considering, that it is very difficult to present each of all amendments on all papers, because

Table 3

Referred Patent No. 4,595,291 (Tatsuno)	Application Serial No. 08/884,680
Regarding item 10 of the Office Action	
<p>1) This Referred patent claims a device, comprising a plurality of optical fibers, each receiving scattered light (see "scattered light" through the text of Specification, Figs.3, 5, 6, 9 and, for example, Claim 1 [see column 12, lines 19, 20 of the top] and Claim 9 [column 13, line 23 of the top], etc., and also comprising a lenses [ see 32 on Figs.4, 7 and 62 on Figs.10, 12, 15-17].</p> <p>2) Figs.10, 12, 17</p>	<p>1) Above Application <u>criticizes</u> a scattered light principles (see Background of the Invention of the above Application) and an improved methods and device are particularly intended for particle direct detection and <u>do not include</u> the lenses</p> <p>2) The Figs.10, 12, 17 of the Referred Patent are regarding scattered light detection and, please, see the proofs described in the item 1) above in this column.</p> <p><u>Additionally</u>, applicant would like to bring Examiner's attention to the following:</p> <p>The device by Referred Patent possibly can not provide the particle measuring by described in that Patent scattered light collection principles, because the scattered light may not be dispersed (distributed) in the direction of the optical fibers, considering that their location is in the "dark" zone for scattered light beam (in the non-effective zone for scattered light, please, see the figure in Table 1).</p>



Table 4

Referred Patent No. 5,325,169 (Nakamoto et al.)	Application Serial No. 08/884,680
<p>Regarding item 11 of the Office Action</p> <p>1) This Referred Patent claims the method and device, which are based in the scattered light principles (see Figs.4-8 and independent Claims 1, 7, 18)</p>	<p>1) Above Application <u>criticizes</u> a scattered light principles (see Background of the Invention of the above Application) and an improved methods and device are particularly intended for particle direct detection.</p>

P.S. Regarding request under MPEP §707.07(j), applicant respectfully requests (please, see Transmittal Letter of above Application), that Examiner draft one or more claims for applicant, if Examiner will find it necessary.